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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/600,875

06/20/2003

Blaine Stackhouse

200207083-1

6673

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7590

12/29/2004

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EXAMINER

NGUYEN, DANG T

ART UNIT

PAPER NUMBER

2824

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/600,875

Applicant(s)

STACKHOUSE ET AL.

Examiner

Dang T Nguyen

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 12-20 is/are allowed.  
6) ☒ Claim(s) 1, 6 and 21 is/are rejected.  
7) ☒ Claim(s) 2-5, 7-11 and 22-25 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☒ Other: Search history.

***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 6 and 21 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 rejected under 35 U.S.C. 112, first paragraph, as failing in a manner similar to that of a "single means" claim, especially since no details of the device have been recited. See MPEP 2164.08 (a) below:

**2164.08(a) Single Means Claim**

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Claim 1 is overly broad and indeterminacy in scope and seems to be lacking explicit structure required to "adjusting a set of available magnitudes ....metal programming" as recited.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 6 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Marr U.S. Patent No. 6,630,724.**

**Regarding independent claim 1**, Fig. 4 of Marr discloses a bias generator [440] for testing (Col. 1 lines 28 – 29) of a static random access memory SRAM (Fig. 28; Col. 4 lines 65 - 67) comprising: means [410, 412, 414, 416] for adjusting a set of available magnitudes (Col. 7 lines 29 – 34) of a bias voltage output signal [422] at an output the bias generator [440] using metal programming (Col. 7 lines 1 – 6; Col. 8 lines 52 - 54).

**Regarding dependent claim 6**, Fig. 4 of Marr discloses a bias generator [440] for testing (Col. 1 lines 28 – 29) of a static random access memory SRAM (Fig. 28; Col. 4 lines 65 - 67) comprising: a metal programmable transistor (Fig. 2A [250] is a metal program transistor for antifuses [410 – 416] on Fig. 4 [See Col. 8 lines 52 – 54]) that adjusts a set of available magnitudes (Col. 7 lines 29 – 34) of a bias voltage output signal [422] at the bias generator [440] output when metal programmed (Col. 9 lines 43 - 58).

**Regarding dependent claim 21**, Fig. 4 of Marr discloses a method of modifying a set of available magnitudes (Col. 7 lines 29 – 34) of a bias voltage output signal [442] generated by a bias generator comprising [440]: providing a metal-programmable transistor (Fig. 2A [250] is a metal program transistor of antifuses [410 – 416] on Fig. 4 [See Col. 8 lines 52 – 54]) in the bias generator [440]; and metal programming [420] the metal-programmable transistor (Fig. 6) to connect the transistor to circuitry of the bias generator [440], such that a corresponding ON state resistance of the metal-programmed transistor is combined with an effective ON state resistance of the circuitry to modify the available magnitudes of the set (See Fig. 10, Col. 12 lines 32 – 42 for disclosing transistors of program driver circuit 1010 for program the metal program transistor 1016).

***Allowable Subject Matter***

3. Claims 2 – 5, 7 – 11 and 22 - 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**With respect to claim 2**, the primary reason for indication of allowable subject matter is that the prior art fails to teach or suggest “ wherein the bias voltage output signal biases a gate of a weak write pull-down transistor of a write drives in the SRAM with a target magnitude predetermined for the SRAM”.

**With respect to claims 3 and 8**, the primary reason for indication of allowable subject matter is that the prior art fails to teach or suggest “in the bias generator, the

Art Unit: 2824

metal programmable transistor comprising either or both of a metal-programmable pull-up transistor and a metal-programmable pull-down transistor that change one or both of a range and a resolution of the set of available magnitudes when the metal-programmable transistor is metal programmed”.

**With respect to claim 7**, the primary reason for indication of allowable subject matter is that the prior art fails to teach or suggest “a pull-up array of transistors connected between a first supply voltage and the bias generator output; a pull-down transistor connected between the bias generator output and a second supply voltage; and a gate bias circuit connected between a mode select input and a gate of the pull-down transistor, wherein the metal-programmable transistor is connectable one or both of in series and in parallel with either or both of the pull-up array and the pull-down transistor”.

**With respect to claim 22**, the primary reason for indication of allowable subject matter is that the prior art fails to teach or suggest “wherein providing a metal programmable transistor comprises either or both of a metal programmable pull-up transistor and a metal programmable pull-down transistor in the bias generator; wherein metal programming the metal-programmable transistor comprises connecting either or both of the metal programmable pull-up transistor to the bias generator circuitry”.

4. Claims 12 – 20 are allowed over prior art.

The following is a statement of reasons for the indication of allowable subject matter:

**With regard to claims 12 and 17**, the primary reason for indication of allowable subject matter is that the prior art fails to teach or suggest "a bias generator having a first transistor having a source connected to drains of the pull-up transistor array, a drain connected to the bias generator output and a gate connected to an inverse mode select input; and a second transistor having a source connected to the second supply voltage, a drain connected to the bias generator output, and a gate connected to the inverse mode select input, wherein the mode select input and the inverse mode select input control a selection between a weak write test mode (WWTM) and a default mode of operation of the bias generator, a set of selection inputs selecting the set of available magnitudes of the bias voltage output signal in the WWTM, the bias voltage output signal being a logic low level at the bias generator output in the default mode".

***Prior art***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McElroy et al.      Pub. No. US 2004/0042276 A1      Pub. Date: Mar. 4, 2004

Sher et al.          Patent No. US 6,496,027 B1      Date of Patent: Dec. 17, 2002

Bedarida et al.      Patent No. US 6,385,107 B1      Date of Patent: May 7, 2002

***Contact Information***

6. Any inquiry concerning this communication from the examiner should be directed to Dang Nguyen, who can be reached by telephone at (571) 272-1955. Normal contact

Application/Control Number: 10/600,875  
Art Unit: 2824

Page 7

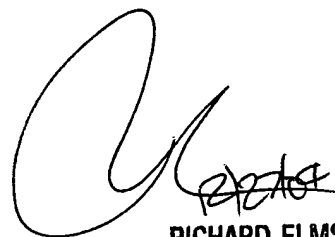
times are M-F, 8:00 AM - 4:30 PM.

Upon an unsuccessful attempt to contact the examiner, the examiner's supervisor, Richard Elms, may be reached at (571) 272-1869.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, whose telephone number is (703) 305-3900. The faxed phone number for organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the Status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or [EBC@uspto.gov](mailto:EBC@uspto.gov).

Dang Nguyen 12/20/2004

A handwritten signature in black ink, appearing to read 'Richard Elms', is written over a circular stamp.

**RICHARD ELMS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**